

REMARKS/ARGUMENTS

In the specification, Applicant has provided a new title that is descriptive of the invention of the elected claims.

In amended FIG. 1, the cross sectional TEM picture of a resistive element has been substituted by a drawing of the resistive element that does not become an indistinguishable single black layer after scanning. No new matter was added.

Claims 17-30 were pending in the application. Claims 17-30 have been rejected. Claims 17-30 have been cancelled and new claims 31-42 have been added.

Rejections under 35 U.S.C. §102.

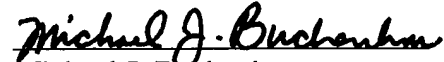
The Office Action has rejected claims 17-30 under 35 U.S.C. §102(e) as being anticipated by Grynkewich et. al (published patent application 2004/0211749). Applicant respectfully requests reconsideration of the rejections in view of the addition of new claims and the following remarks.

Claim 31 relates to a semiconductor device comprising a resistive element, wherein the resistive element comprises: a bottom metal layer; an insulating barrier layer positioned over the bottom metal layer; and a non-magnetic metal layer positioned over and in direct contact with the insulating barrier layer.

Grynkewich relates to relates to magnetoelectronics devices, and more particularly to methods for contacting electrically conducting layers overlying magnetoelectronics elements of magneto resistive random access memory devices. Grynkewich does not teach or suggest the structure set forth in claim 31. In Grynkewich a barrier layer 22 has a magnetic layer 24 over the barrier layer (FIG. 1) or an insulating portion 30 over the barrier 22 (FIGs. 2-9). By contrast, claim 31 requires a non-magnetic metal layer positioned over and in direct contact with the insulating barrier layer. Claims 32 – 42 are either directly or indirectly dependent on claim 31 and are patentable for at least the same reasons that claim 31 is patentable.

For the foregoing reasons, Applicant respectfully requests allowance of the pending claims and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

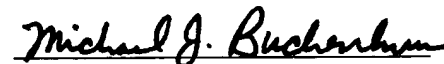

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I hereby certify that this Amendment and Response to Office Action, and any documents referred to as attached therein, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.


Michael J. Buchenhorner

Date: February 9, 2005

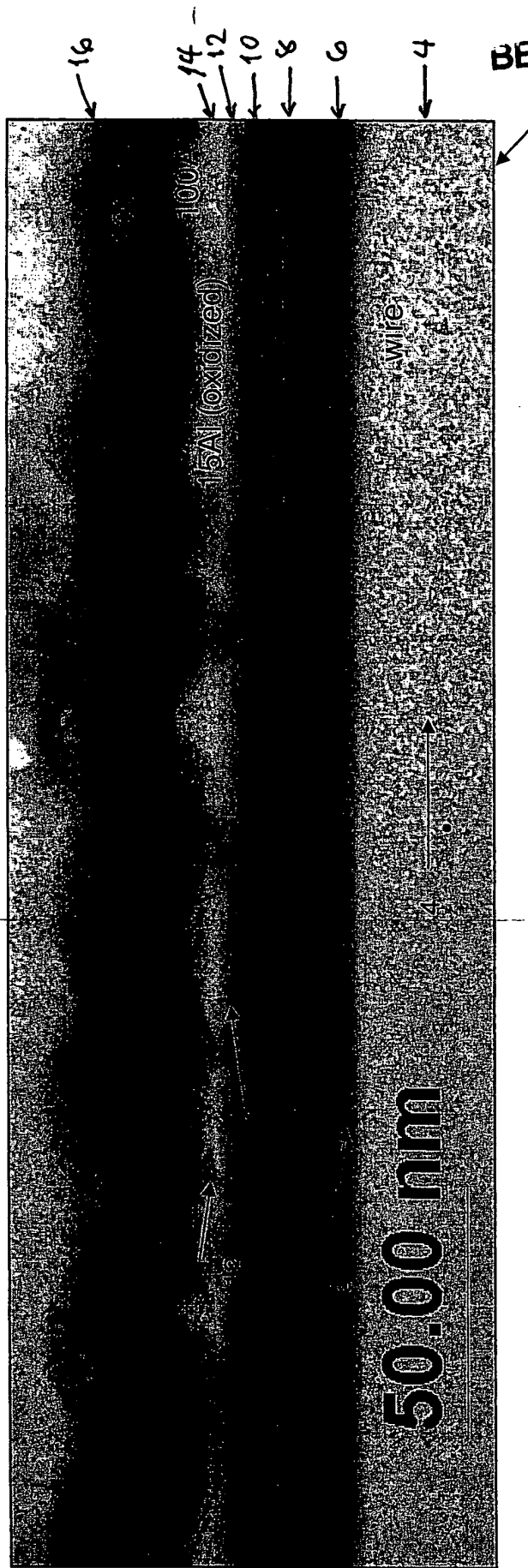
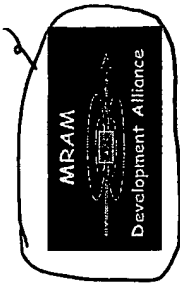
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Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 1. This sheet, which includes FIG. 1 replaces the original sheet including FIG. 1.

Attachment: Replacement sheet
Annotated sheet showing changes



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Fig. 1: TEM x-section of a stack grown for use in a resistive element array. The bottom of the stack consists of 150 TaN/50 Ta/20 CoFe (dark area), on top of that a 15 A-Al, that were oxidized using remote plasma (smooth grey area), followed by 100 A-Al (bright contrast) and 100 A of TaN.

→ Replaced with drawings showing clear demarkation between layers